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# The Effects of Cannabis Use During Adolescence

Cannabis and Youth: Implications for Legalization in Ontario

Amy Porath, Ph.D.

October 30, 2017



# About CCSA

- **Vision:** A healthier Canadian society where evidence transforms approaches to substance use.
- **Mission:** To address issues of substance use in Canada by providing national leadership and harnessing the power of evidence to generate coordinated action.
- **Value Proposition:** CCSA was created by Parliament to provide national leadership to address substance use in Canada. A trusted counsel, we provide national guidance to decision makers by harnessing the power of research, curating knowledge and bringing together diverse perspectives.



# CCSA's National Priorities and Areas of Action



National Framework for Action (2005): Collective action for collective impact

In **2016**: Consultations to inform the **refresh** of the National Framework for Action

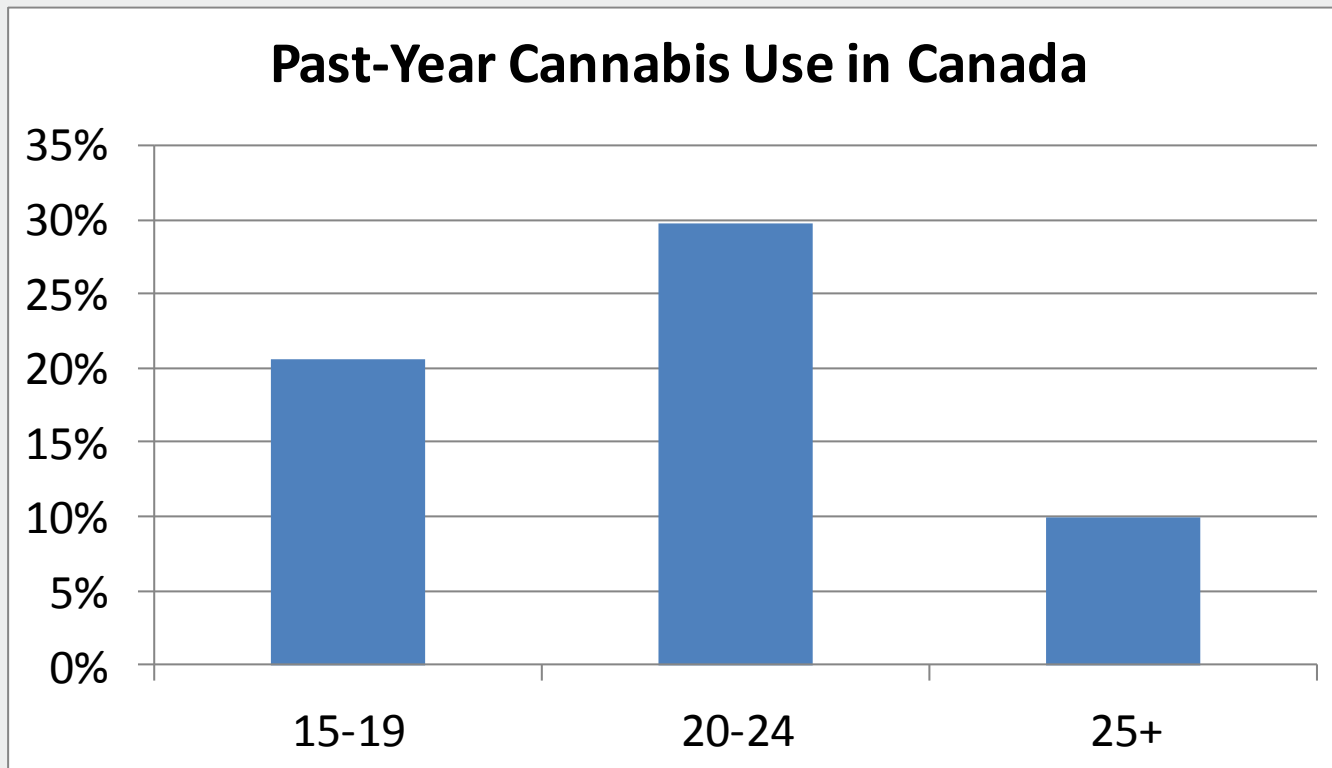


# Presentation Overview

- Health effects of youth cannabis use
- CCSA research and Kmb products



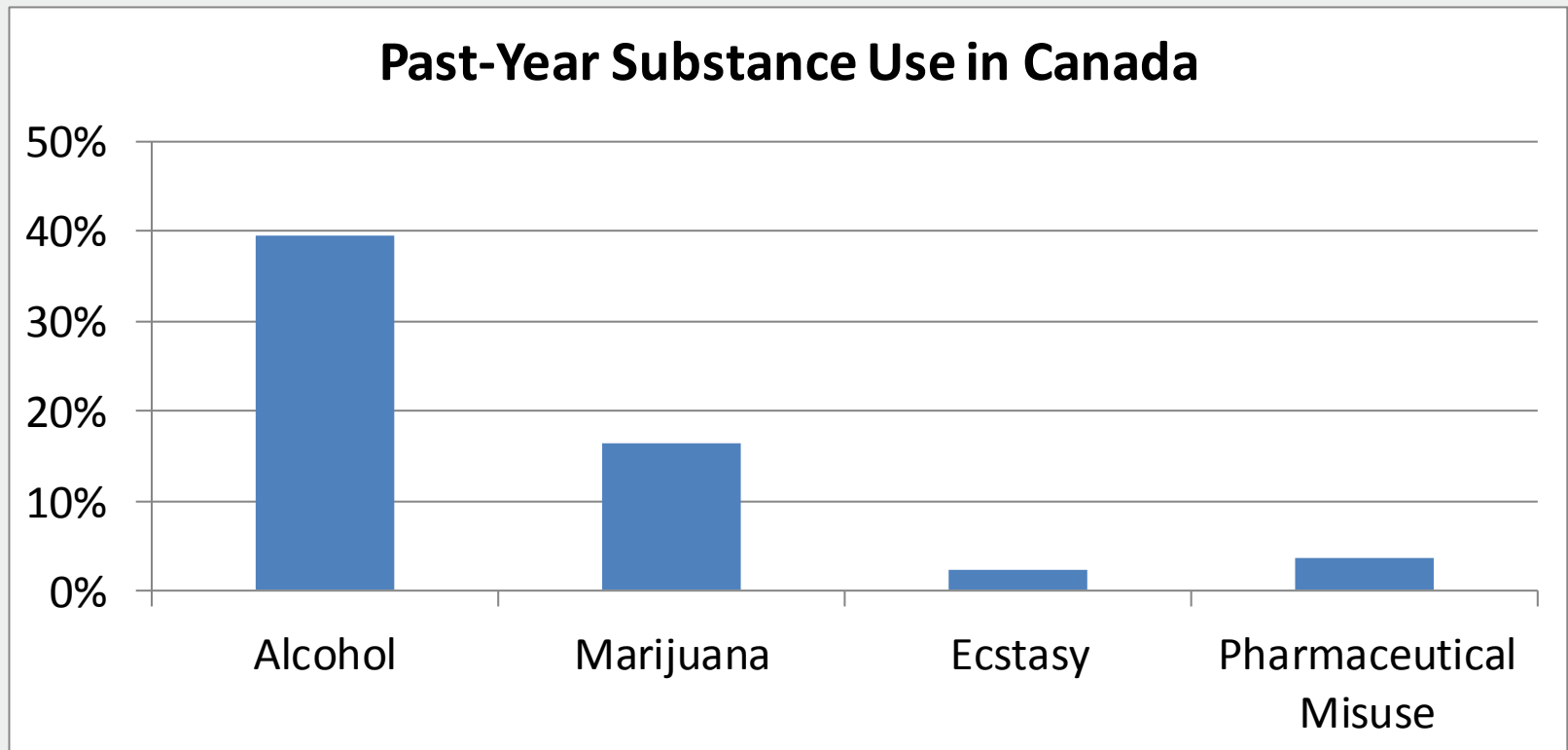
# Prevalence of Youth Cannabis Use



**Source:** Statistics Canada (2017). Canadian Tobacco, Alcohol and Drugs Survey: Summary of Results from 2015.



# Prevalence of Youth Cannabis Use



**Source:** Health Canada (2016). Canadian Student Tobacco, Alcohol and Drugs Survey 2014-2015.



# Misinformation and Misperceptions among Youth



# The Effects of Cannabis Use during Adolescence

- Report summarizes what is known and not known about the effects of cannabis use by youth
- Identifies where the evidence is consistent, mixed and emerging







# What Are the Effects of Cannabis Use during Youth on the Brain and Behaviour?

- Emerging evidence that early and frequent cannabis use can alter the structure of the developing brain
- Particularly areas responsible for memory, decision making and executive functioning





# What Are the Effects of Cannabis Use during Youth on the Brain and Behaviour? (cont.)

- Consistent evidence that individuals who use cannabis regularly have lower educational attainment than their non-using peers
  - Poor academic performance
  - Increased risk of dropping out of school
  - Some evidence suggesting reduced IQ
- Consistent evidence that cannabis impairs driving ability and doubles the risk of motor vehicle collisions
  - Impaired tracking, reaction time, visual function, divided attention, decision making
  - Risk increases even further when cannabis is mixed with alcohol



# Is There a Link Between Cannabis and Mental Illness?

- Consistent evidence of high rates of cannabis use disorders in those with mental illness
- This co-morbidity has a negative impact on prognosis and course of all psychiatric disorders, especially when cannabis use is initiated in adolescence
- Consistent evidence of a strong relationship between adolescent cannabis use and psychosis
- Role of adolescent cannabis use in the onset of depression, anxiety, eating disorders and childhood behavioural disorders is less understood



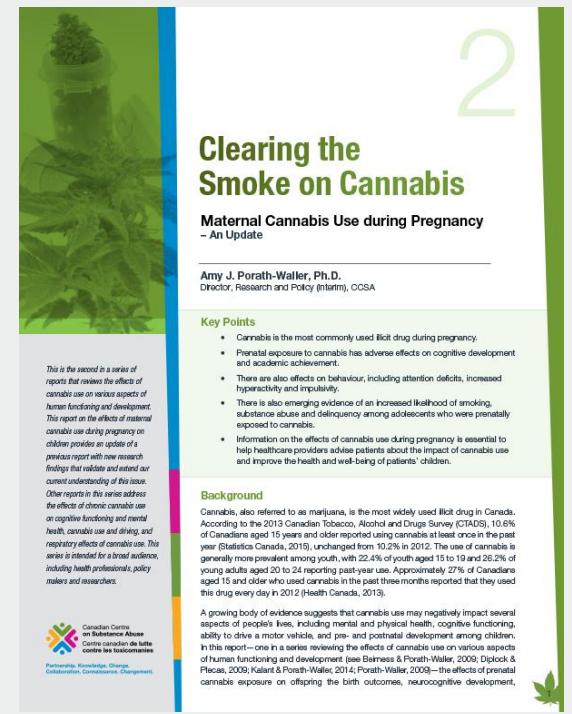
# Is Cannabis Addictive?

- Perception that cannabis is not an addictive drug
- 1 in 6 who use cannabis during adolescence will develop a cannabis use disorder
- 1 in 20 Canadian youth met the criteria for cannabis abuse or dependence during 2012 (Statistics Canada, 2013)
- Problems most often develop among heavy or frequent users
- Withdrawal can occur on discontinuation

# Cannabis Research Products

- **Clearing the Smoke on Cannabis Series (updates)**
  - Chronic Use and Cognitive Functioning and Mental Health (2016)
  - Maternal Cannabis Use During Pregnancy (Update coming in Winter 2018)
  - Cannabis Use and Driving (2017)
  - Respiratory Effects of Cannabis Smoking (2016)
  - Medical Use of Cannabis and Cannabinoids (2016)
- **Cannabis: Canadian Drug Summary (2016)**

Available at [www.ccsa.ca](http://www.ccsa.ca)



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## Clearing the Smoke on Cannabis

### Maternal Cannabis Use during Pregnancy – An Update

Amy J. Porath-Waller, Ph.D.  
Director, Research and Policy (Interim), CCSA

**Key Points**

- Cannabis is the most commonly used illicit drug during pregnancy.
- Prenatal exposure to cannabis has adverse effects on cognitive development and academic achievement.
- There are also effects on behaviour, including attention deficits, increased hyperactivity and impulsivity.
- There is also emerging evidence of an increased likelihood of smoking, substance abuse and delinquency among adolescents who were prenatally exposed to cannabis.
- Information on the effects of cannabis use during pregnancy is essential to help healthcare providers advise patients about the impact of cannabis use and improve the health and well-being of patients' children.

**Background**

Cannabis, also referred to as marijuana, is the most widely used illicit drug in Canada. According to the 2013 Canadian Tobacco, Alcohol and Drugs Survey (CTADS), 10.6% of Canadians aged 15 years and older reported using cannabis at least once in the past year (Statistics Canada, 2015), unchanged from 10.2% in 2012. The use of cannabis is generally more prevalent among youth, with 22.4% of youth aged 15 to 19 and 26.2% of young adults aged 20 to 24 reporting past-year use. Approximately 27% of Canadians aged 15 and older who used cannabis in the past three months reported that they used this drug every day in 2012 (Health Canada, 2013).

A growing body of evidence suggests that cannabis use may negatively impact several aspects of people's lives, including mental and physical health, cognitive functioning, ability to drive a motor vehicle, and pre- and postnatal development among children. In this report—one in a series reviewing the effects of cannabis use on various aspects of human functioning and development (see Bairnes & Porath-Waller, 2009; Diplock & Plecas, 2009; Kalant & Porath-Waller, 2014; Porath-Waller, 2009)—the effects of prenatal cannabis exposure on offspring the birth outcomes, neurocognitive development,

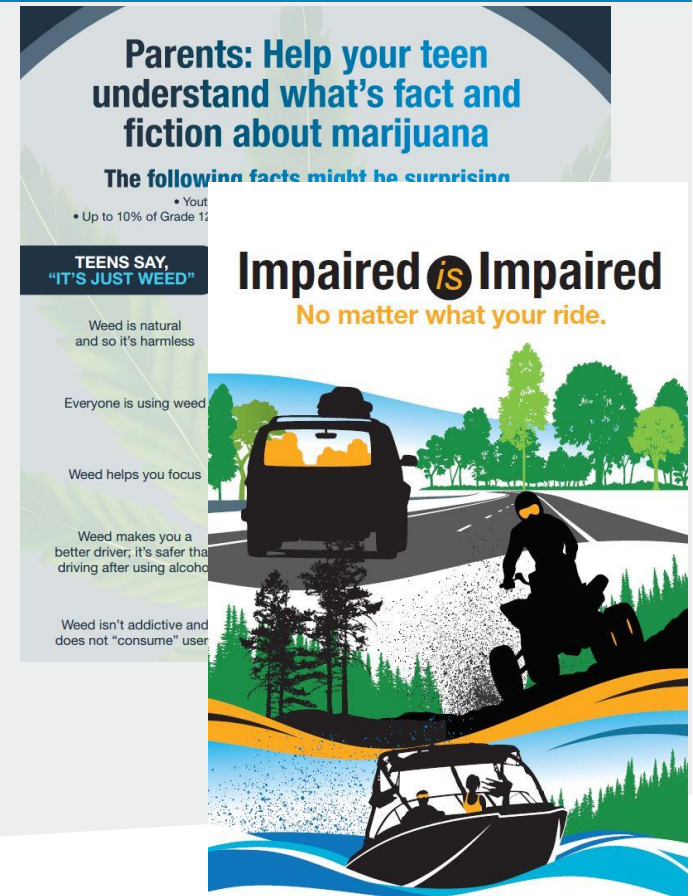
This is the second in a series of reports that reviews the effects of cannabis use on various aspects of human functioning and development. This report on the effects of maternal cannabis use during pregnancy on children provides an update of a previous report with new research findings that validate and extend our current understanding of this issue. Other reports in this series address the effects of chronic cannabis use on cognitive functioning and mental health, cannabis use and driving, and respiratory effects of cannabis use. This series is intended for a broad audience, including health professionals, policy makers and researchers.

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# Mobilization of Knowledge, Tools and Resources

- Communication guide to speak with youth about cannabis (**Coming in Winter 2018**)
- Drug-impaired driving toolkit for educators
- Online learning module
- Toolkit for hosting live learning events related to cannabis and youth





# Questions, Comments






# Contact Information

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